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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/781,227	02/17/2004	Santosh Kumar Sadananda	6518P005	2364

8791 7590 04/10/2007  
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EXAMINER
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LI, SHI K

ART UNIT	PAPER NUMBER
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2613

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/10/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

5K

<b>Office Action Summary</b>	<b>Application No.</b> 10/781,227	<b>Applicant(s)</b> SADANANDA, SANTOSH KUMAR	
	<b>Examiner</b> Shi K. Li	<b>Art Unit</b> 2613	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 February 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-52 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-52 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 February 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>11/15/04, 1/13/05</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Specification*

1. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

### *Drawings*

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p) because the numbers and letters are too small. Number, letters and reference characters must be at least .32 cm (1/8 inch) in height. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### *Claim Objections*

3. Claims 1, 21 and 39 are objected to because of the following informalities: "wave division multiplexing" should read "wavelength division multiplexing" (see paragraph [0003] of instant specification). Appropriate correction is required.

### *Claim Rejections - 35 USC § 112*

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 2-3 and 9-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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6. Claim 2 recites the limitation "the protection paths" in line 1 of the claim. There is insufficient antecedent basis for this limitation in the claim.

Claim 2 recites the limitation "wherein each of the protection paths suitable to be shared by multiple working paths is maximally shared by a predetermined number of working paths" in lines 1-3 of the claim and "wherein the protection path is selected when the corresponding number of working paths currently sharing with the selected protection path is less than the predetermined number of working paths". It is unclear whether the protection path is maximally shared by a predetermined number of working paths or it is shared by less than the predetermined number of working paths.

Claim 9 depends on claim 6. Claim 6 recites in line 2 the limitation "locating in a database an existing protection path" while claim 9 recites in line 9 the limitation "the existing protection is not located". It is unclear whether the existing protection path is located or not located.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-12 and 21-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chaudhuri et al. (U.S. Patent 6,587,235 B1) in view of Friskney et al. (U.S. Patent Application Pub. 2004/0120705 A1).

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Regarding claim 1, Chaudhuri et al. teaches in FIG. 5 a shared protection scheme where traffics are assigned different priorities. Chaudhuri et al. teaches not to share protection with another working path having the same priority. The difference between Chaudhuri et al. and the claimed invention is that Chaudhuri et al. does not teach receiving request for allocating protection path that meets a set of disjointness constraints. Friskney et al. teaches in [0117] link-disjoint and node-disjoint path and in FIG. 4 that path request specifies source, destination and resilience requirements. One of ordinary skill in the art would have been motivated to combine the teaching of Friskney et al. with the shared protection scheme of Chaudhuri et al. because specifying resilience requirements in path request allows the path preparation system to find paths that fulfill the customer's need. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to include disjointness in path request, as taught by Friskney et al., in the shared protection scheme of Chaudhuri et al. because specifying resilience requirements in path request allows the path preparation system to find paths that fulfill the customer's need.

Regarding claim 2, Chaudhuri et al. teaches in FIG. 5 that the protection path is maximally shared by working paths.

Regarding claims 3-5, the use of counter/database to keep track of values is well known in the art. For example, see FIG. 3 of Doshi et al. (U.S. Patent Application Pub. 2004/0205239 A1).

Regarding claims 6-7 and 9-12, Friskney et al. teaches in FIG. 4 to find working path and restoration path according to requirements.

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Regarding claim 8, Chaudhuri et al. specifies that a restoration channel can be shared by a super premium channel and a standard channel.

Regarding claims 13 and 21-22, Friskney et al. teaches in paragraph [0015] that high priority traffic preempts low priority traffic.

Regarding claims 23, 25 and 27, Chaudhuri et al. teaches in FIG. 5 and FIG. 6 the assignment of traffics with different priority.

Regarding claims 24, 26, 28-31, 34 and 36, the use of counter/database to keep track of values is well known in the art. For example, see FIG. 3 of Doshi et al. (U.S. Patent Application Pub. 2004/0205239 A1).

Regarding claim 32-33, 35 and 37-38, Chaudhuri et al. teaches in FIG. 5 and FIG. 6 the assignment of traffics with different priority.

9. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chaudhuri et al. and Friskney et al. as applied to claims 1-13 and 21-38 above, and further in view of Elie-Dit-Cosaque et al. (U.S. Patent Application Pub. 2004/0218525 A1).

Chaudhuri et al. and Friskney et al. have been discussed above in regard to claims 1-13 and 21-38. Friskney et al. teaches in [0117] link-disjoint and node-disjoint path. Furthermore, Elie-Dit-Cosaque et al. teaches in paragraph [0008] completely disjoint and partially disjoint and in FIG. 5A-FIG. 5E link-disjoint and node-disjoint paths. One of ordinary skill in the art would have been motivated to combine the teaching of Elie-Dit-Cosaque et al. with the modified shared protection scheme of Chaudhuri et al. and Friskney et al. to allow for completely disjoint and partially disjoint paths as backup paths because it reduces the cost of protection and gives customers choices for comprising between cost and reliability. Thus it would have been obvious

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to one of ordinary skill in the art at the time the invention was made to provide choices for partially/completely link/node-disjoint, as taught by Elie-Dit-Cosaque et al., in the modified shared protection scheme of Chaudhuri et al. and Friskney et al. to allow for completely link/node disjoint and partially link/node disjoint paths as backup paths because it reduces the cost of protection and gives customers choices for comprising between cost and reliability.

10. Claims 39-40, 43-47 and 50-52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chaudhuri et al. and Friskney et al. as applied to claims 1-13 and 21-38 above, and further in view of Chaudhuri (U.S. Patent 6,130,876).

Chaudhuri et al. and Friskney et al. have been discussed above in regard to claims 1-13 and 21-38. The difference between Chaudhuri et al. and Friskney et al. and the claimed invention is that Chaudhuri et al. and Friskney et al. do not teach reversion after failure has been repaired. Chaudhuri et al. cites in col. 6, lines 26-30 U.S. patent application 08/936,369, which is issued as patent 6,130,876, for control system for handling protection. Chaudhuri teaches in FIG. 4, step 54 that when the failed link is repaired the traffics are reverted to their original state. One of ordinary skill in the art would have been motivated to combine the teaching of Chaudhuri with the modified shared protection scheme of Chaudhuri et al. and Friskney et al. because reverting traffic to a repaired path allows the protection path to be used for carrying low priority traffic. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to revert to working path when the working path has been repaired, as taught by Chaudhuri, in the modified shared protection scheme of Chaudhuri et al. and Friskney et al. because reverting traffic to a repaired path allows the protection path to be used for carrying low priority traffic.

11. Claims 41-42 and 48-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chaudhuri et al., Friskney et al. and Chaudhuri as applied to claims 39-40, 43-47 and 50-52 above, and further in view of Elie-Dit-Cosaque et al. (U.S. Patent Application Pub. 2004/0218525 A1).

Chaudhuri et al., Friskney et al. and Chaudhuri have been discussed above in regard to claims 1-13. Friskney et al. teaches in [0117] link-disjoint and node-disjoint path. Furthermore, Elie-Dit-Cosaque et al. teaches in paragraph [0008] completely disjoint and partially disjoint and in FIG. 5A-FIG. 5E link-disjoint and node-disjoint paths. One of ordinary skill in the art would have been motivated to combine the teaching of Elie-Dit-Cosaque et al. with the modified shared protection scheme of Chaudhuri et al., Friskney et al. and Chaudhuri to allow for completely disjoint and partially disjoint paths as backup paths because it reduces the cost of protection and gives customers choices for comprising between cost and reliability. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide choices for partially/completely link/node-disjoint, as taught by Elie-Dit-Cosaque et al., in the modified shared protection scheme of Chaudhuri et al., Friskney et al. and Chaudhuri to allow for completely link/node disjoint and partially link/node disjoint paths as backup paths because it reduces the cost of protection and gives customers choices for comprising between cost and reliability.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shi K. Li whose telephone number is 571 272-3031. The examiner can normally be reached on Monday-Friday (7:30 a.m. - 4:30 p.m.).



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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on 571 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

skl

3 April 2007



**Shi K. Li**  
**Patent Examiner**